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Green et al.(10) **Pub. No.: US 2014/0122819 A1**(43) **Pub. Date: May 1, 2014**(54) **VIRTUAL DISK MANIPULATION
OPERATIONS****Publication Classification**(71) Applicants: **Dustin L. Green**, Redmond, WA (US);
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Feb. 8, 2010, now Pat. No. 8,627,000.(57) **ABSTRACT**

Described is a technology by which a virtual hard disk is able to continue servicing virtual disk I/O (reads and writes) while a meta-operation (e.g., copying, moving, deleting, merging, compressing, defragmenting, cryptographic signing, lifting, dropping, converting, or compacting virtual disk data) is performed on the virtual disk. The servicing of virtual disk I/Os may be coordinated with meta-operation performance, such as by throttling and/or prioritizing the virtual disk I/Os. Also described is performing a meta-operation by manipulating one or more de-duplication data structures.

